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James B. Conant, President of the Association

In electing Dr. James B. Conant president of the American Association for the Advancement of Science, the council chose an eminent scientist at the zenith of his powers. The election was in recognition of Dr. Conant's high position in American science and education. It is likely that it was also in part because of the opportunity the position offers of advancing science, not in special fields alone but on the entire scientific front. This is a time calling for scientific statesmenship, as well as for eminent specialists; for wide horizons, as well as for penetrating insight into special problems. The sciences have become the most potent forces in the world today; their wise use is one of the chief concerns of those who guide civilization. The Association has elected as its president a great and experienced leader for these fateful days.

Nothing illustrates the democracy of American science better than the varied antecedents and accomplishments of the men who have been elected to the presidency of the American Association for the Advancement of Science. In the first place, their fields of principal interest range widely over the sciences. For example, the presidents of the Association and their respective fields for the past ten years have been as follows:

E. G. Conklin (zoology), Princeton 1936
G. D. Birkhoff (mathematics), Harvard 1937
Wesley C. Mitchell (economics), Columbia 1938
Walter B. Cannon (physiology), Harvard 1939
Albert F. Blakeslee (botany), Carnegie Institution ... 1940
Irving Langmuir (chemistry), General Electric Company 1941
Arthur H. Compton (physics), Washington University, St. Louis 1942
Isaiah Bowman (geography), Johns Hopkins 1943
A. J. Carlson (physiology), Chicago 1944
Charles F. Kettering (engineering), General Motors 1945

Of these ten eminent scientists who have been elected to the presidency of the Association, two were foreign born, Bowman in Ontario, and Carlson in Sweden. Seven of the remaining eight were born and reared in rural communities or small towns, three of them in Ohio and one each in Illinois, Michigan, and Wisconsin. Only one of them, Dr. Langmuir, was born in a great center of population, Brooklyn. Several of them took their first college work in smaller institutions. On the whole, they rose from the ranks to places of eminence and high responsibility in American science.

Several earlier presidents of the Association also were foreign born, among whom were Louis Agassiz, A. A. Michelson, Michael I. Pupin, and Franz Boas, all men of great distinction. Dr. J. Playfair McMurrich, born in Canada and a citizen of Canada, was elected president of the Association at the Toronto meeting in December, 1921. It is somewhat inappropriate to mention Dr. McMurrich as a foreign born president of the Association, for except for a few matters relating to customs duties there is no boundary line between Canadian and United States scientists. In fact, the Association has held five meetings in Canadian cities. At a time when cordial relations among scientists throughout the world have become necessary for the future of civilization, it is a pleasure to recall nearly a century of close cooperation with our Canadian colleagues.

The Science Writing Award

The writing of current science for the general public is about to receive formal recognition as an effective means of advancing science and human welfare. The Association has concluded arrangements for administering a Science Writing Award, established in commemoration of the hundredth anniversary of the birth of George Westinghouse and supported by the Westinghouse Educational Foundation and officially called the George Westinghouse Science Writing Award. The first recognitions will be made at

the meeting of the Association which will be held in St. Louis next March 27–30.

Heretofore prizes, medals, and citations in the fields of science have been given only for distinguished scientific researches or for contributions to scientific theories. The Science Writing Award is not only new but is something entirely different from all previous recognitions of contributions to the advancement of science. It is not even to be awarded to professional scientists. It will be an award for superior science writing for lay readers, that is, for expositions of current progress in science that are distinguished for their accuracy, clarity, and literary quality; that lead the intelligent lay reader from the domains of the generally known out to the horizons where new scientific worlds are being discovered with all their wonders and promises of benefits to mankind.

There are constructive purposes to the Science Writing Award, somewhat analogous to those which animated George Westinghouse in his pioneer days as an inventor and manufacturer. This new award has been established in the firm belief that science is not something magical and mysterious that must be looked at by the common man from afar, but something near and real and honest and important for the mind as well as for the comfort of the body, something which stimulates the imagination, demands clear thinking and stabilizes the emotions. It has been established in the firm belief also that science will rise highest and reach farthest from a citizenry acquainted not only with its glories but also with the orderly paths by which they are attained.

Science writing for the daily press and serial publications as a profession is something relatively new. All those who have been distinguished in this field, with one or two exceptions, are still active in their profession. They attend the meetings of the Association and other scientific societies and write reports of them that appear in the leading daily papers in the country, often as news of front-page importance. To maintain and raise the high standards they have set as writers of science they have formed the National Science Writers Association which is affiliated with the American Association for the Advancement of Science. These men and women have not been taught the technicalities of science in formal courses under professional scientists nor have they learned how to write science from teachers of English. They have read science widely, caught its high spirit and sensed its ways of working by contacts with the great scientists at scientific meetings, and they have learned how to write clearly and effectively for the general public in the editorial rooms of the daily press. Their great success has caught the attention of those who have established the Science Writing Award and has raised confident hopes that this signal recognition of their work will increase their number and the number of daily papers which give regular attention to science, the most fundamental and far-reaching social influence in the world today.

Clear and effective science writing will develop a constantly increasing public which will know and understand not only current advances in science but will habitually share in the intellectual integrities and habits of mind of scientists. Only out of a population having such qualities can a successful and enduring civilization be developed. Consequently, in administering the George Westinghouse Science Writing Award, the Association will fulfill its purpose of advancing science directly and indirectly.

Training and Preparedness

Events of the past ten weeks have shown that scientists are reluctant to have legislation thrust upon them but are capable of vigorous action when sufficiently aroused. It is to be hoped that the present feeling of legislative interest and concern may be turned to another problem which demands the right solution, yet lies before a Congressional committee that needs every kind of information except the kinds it is getting.

The problem is that of replacing the men and women who were lost to science during the war years. The Congressional committee is the House Military Affairs Committee. The legislation under consideration involves universal military service.

On first thought, universal military service, like the Selective Service still in force, may seem to be the concern of each of us as citizens rather than as scientists. In fact, however, it must be both a public and a professional concern. The present personnel situation among engineers and scientists is widely known, but the salient facts may be passed in quick review:

College enrollments started to decline in 1940; and in 1943, when 18-year olds were drafted, only specialized courses for army and navy groups kept the colleges and universities functioning at all. True, the men who were assigned to the colleges received intensive doses of mathematics, physics, and chemistry; but the object was to meet the immediate requirements of navigation, flight, fire power, and chemical warfare. Scientific curiosity received scant encouragement

in this earnest atmosphere, and the curricula were not designed to provide backgrounds for college and university degrees in the sciences. Indeed, so much was crammed so quickly into youthful heads that its survival beyond the classroom occurred only when and if it was put to early use in combat. This was essential military training—it was not education.

Under Selective Service, men were no longer permitted to finish work for degrees, and over the years a deficit of scientific and technological personnel accumulated, reaching a total that may, according to the Bush report, run as high as 150,000 at the bachelor's level, and which certainly is not less than 17,000 at the doctorate level.

Meanwhile draft deferment kept young scientists and engineers in essential positions, until the termination of hostilities prompted cancellation of virtually all deferments. With this indiscriminating policy, the military services absorbed most of the physically fit and mentally qualified young men who were—and are—so sorely needed to handle the scientific and technological problems of the peace and to aid in the training of returning veterans. There has recently been a relaxation of this ruinous policy of indiscriminate "selection," but discretion lies largely in the hands of local draft boards.

The problem of recruiting a new generation of scientists has not yet been faced, and it is the solution of this problem which must be brought to public attention. There is a tendency to assume that recruitment will automatically occur as service men, with pent-up ambitions to be engineers or biologists or physicists, seize the opportunity provided by the "GI Bill of Rights" to return to college and to fill in the gaps in the ranks of scientists. It is too early to tell, but the experience of 1919–22 affords no basis for optimism. Service men are older in years and in experience than they were when drafted. Technological training is long and arduous. Its length will discourage those who must make their way in the world, and its difficulty will stop many who find they can not bridge the gap which discontinuity in mental training inevitably created. There is no good reason to believe, or sufficient basis to hope, that veterans will take their places in normal numbers among the depleted ranks of scientists and engineers.

Meanwhile Selective Service goes on, taking another group of 18-year olds and enhancing the already alarming shortage. There is, moreover, reason to believe that Selective Service will continue as at present until Congress acts upon universal military service. And as now phrased, the universal military service bill will continue to interrupt the training of young men who might go into scientific work and thus expose them—and science—to all the known hazards of discontinuity. These hazards include both the loss of recruits and the irreparable, if intangible, damage caused by a year's break in the training of those who persist in becoming scientists.

The policy of indiscriminate selection is propounded and justified in the name of Democracy. For, it is claimed, the sons of Peter Dzwonczyk must be treated like the sons of John Alden. Unimaginatively it is assumed that the average must set the pace—that technological brilliance must be ignored, whether it be found in Peter Jr. or John Jr. Blandly, in the name of an uninspired definition of Democracy, it is concluded that we can somehow build up our manpower, ignore our technological power, and still emerge fully prepared for every contingency of peace or war. Neither our allies nor our enemies in the late and unlamented war made any such assumption as this.

During the past few weeks ten organizations, with the cooperation of the Association, have concluded that we can no longer leave the technological pre-eminence of this country to chance—the chance of making up lost ground from men whose training is arbitrarily interrupted. These organizations see in the 1,200,000 young men who reach the age of 18 each year a pool of strength that may be channeled in several directions. While Selective Service continues, and if Universal Military Service is adopted, they are proposing that capable men be screened out by well established competitive methods, and that those who qualify and are interested be sent to the colleges and technological schools of their own choice, to study sciences or engineering in lieu of military training. Some of the details of the proposal were stated in the October issue of the Bulletin.

With established machinery for selection and 1,200,000 potential candidates, many of whom would have no other chance to enter college, the nation can quickly assure a normal flow of students into these depleted fields, possibly providing the schools with more and better student material than they have had at any time in the past. The organizations sponsoring this proposal are neither supporting nor opposing universal military service. But they share the firm and unanimous conviction that preparedness for the pursuits of peace or for the grimmer needs of war is hollow—that our country is vulnerable if we

risk the productive skill and the technological and scientific pre-eminence on which productive genius is based.

The ten organizations, besides the Association, which are sponsoring this program of personnel recruitment are the American Chemical Society, American Institute of Electrical Engineers, American Institute of Mining and Metallurgical Engineers, American Society of Civil Engineers, American Society of Mechanical Engineers, Electrochemical Society, Engineers Council for Professional Development, Engineers' Joint Council, Engineers' Society of Western Pennsylvania, and the Institute of Radio Engineers. Their representatives are confident that scientists in industry, institutions of learning, and government laboratories will feel a keen interest in their proposals. They even venture the hope that there may be virtual unanimity among professional men in support of such a program. When Congress reconvenes, action must and will be taken, and—it is hoped—other organizations will actively support this significant effort to have the nation's scientific and technological needs seen in proper perspective.—H.A.M.

A.A.A.S. Memberships and Fellowships

Memberships

There are seven classes of members in the Association, including life members, emeritus members, and honorary members.

Annual members are members who pay annual dues; dues have been $5 per year since 1919. Each annual member receives a subscription for the A.A.A.S. BULLETIN and for either *Science* or *The Scientific Monthly*, at his option. A member may receive both *Science* and *The Scientific Monthly* by paying $3 per year in addition to his dues.

Fifty-year members are members who have paid dues for membership in the Association continuously for fifty years. They have all the rights and privileges of annual members, but are exempt from the payment of dues. There are at present nineteen fifty-year members.

Emeritus annual members are members, usually chosen from those of longest continuous membership in the Association, whose dues are paid, by direction of the Council, from income of the Luella A. Owen fund. Emeritus annual members are exempt from the payment of dues and have all the rights and privileges of annual members. At present there are six emeritus annual members.

Emeritus life members are members whose life membership payments have been made, by direction of the Council, from income of the Jane M. Smith endowment for this purpose. Emeritus life members are chosen from the members who have had longest continuous membership in the Association. They are exempt from the payment of dues and have all the rights and privileges of annual members. At present there are 67 emeritus life members.

Life members are members who have paid to the Association one hundred dollars at one time. Payments received from life members become after their deaths part of the permanent funds of the Association, the income from which may be used only in support of research. At present there are 504 life members.

Sustaining members are members who have paid to the Association one thousand dollars which, upon their deaths, are transferred to the permanent funds of the Association, the income of which can be used only in support of research.

Honorary members are members who for various special reasons are exempt from the payment of dues. There are at present three classes of honorary members: (a) The officers and members of the Council of the British Association for the Advancement of Science; (b) Honorary junior members, a boy and a girl nominated each year by each affiliated academy of science; (c) the members of the Finance Committee and the attorney at law of the Association.

Election to Fellowship

Article II of the Constitution of the Association has the following rather indefinite provision relative to the election of members to fellowship: "Members who are professionally engaged in scientific work or who have advanced science by research may be elected to be fellows."

Section 5, Article II, of the Bylaws, passed in 1929, defines somewhat further the qualifications for fellowship and procedures for nomination: "Members are eligible to nomination for fellowship if they have contributed to the advancement of science either by the publication of original research or in other significant manner. Nominations for election to fellowship may be made by any three fellows, by the Permanent Secretary, or by any Section Secretary, but before being submitted to the Council every nomination shall have been first approved by the section committee in whose field the nominee's scientific work mainly lies."

The revised constitution to be considered at the

St. Louis meeting next March 27–30 simplifies and clarifies the qualifications for fellowship and the procedures for nomination and election. There have been wide differences among the sections, particularly during the war period, in the percentage of members affiliated with them who have been nominated for election to fellowship. As of last February 12, when the count was made, the distribution of members and fellows of the Association among the various sections was as follows:

	Members	*Fellows*	*% Fellows*
Mathematics	458	485	51
Physics	749	1342	64
Chemistry	3429	1740	66
Astronomy	169	172	50
Geol. & Geog.	733	644	47
Zoological Sci.	1646	1385	46
Botanical Sci.	644	1270	66
Anthropology	227	137	38
Psychology	789	546	41
Social & Econ. Sci.	372	204	35
Hist. & Phil. of Sci.	237	47	16
Engineering	1302	481	27
Medical Sciences	3963	1579	29
Agriculture	357	578	29
Industrial Sci.	72	2	3
Education	307	263	46
No section	541	2	.....
Total	15,995	10,877	40 (av.)

About next February or March the secretary of each section of the Association will receive a list of the members and fellows affiliated with his section. At that time each secretary should carefully examine the list of members affiliated with his section in order to determine those who should be nominated for fellowship.

What Are the Objectives of Science?

This question was asked at a dinner meeting in honor of Dr. Julian Huxley which was held in Washington on last December 5. In view of the fact that unparalleled efforts to advance science are being made by all the allied countries, the question apparently should be easy to answer. But like many other questions relating directly or indirectly to objectives or purposes or values, a satisfying reply could not readily be made.

When it was learned that Dr. Huxley would be in Washington for a few days on a mission for the British Government, an informal dinner for him was hastily arranged by the A.A.A.S. and a number of Naval officers. It was recalled that Dr. Huxley was the first exchange lecturer under the arrangement between the British Association and the American Association, entered into in 1938. The subject of his address, delivered at the Columbus, Ohio, meeting on December 29, 1938, was "Science, War and Reconstruction." It was a distinguished address, and those who heard it desired to hear Dr. Huxley again on some related subject, after the shocks and the dangers and the destructions of a world war. Since governmental support of scientific research and higher education is one of the great problems now before the U. S. Congress, it was suggested to Dr. Huxley that he discuss British support of science. This he graciously consented to do.

Although time was not available for preparing a written address or even for refreshing his memory on the multitude of ways in which the British Government subsidizes scientific research and higher education, he gave a remarkably comprehensive summary of what his countrymen are doing. He began by stating that the British have never adopted any systematic plan for governmental support of science, such as was proposed for this country in the Bush Report and in the several bills which have been introduced in the U. S. Senate. The British appear almost to take pride in "muddling through," an attitude that may suggest carelessness but implies the ability to make continual adjustments to circumstances and a willingness to compromise in the interest of progress.

Generally speaking, the British Government has supported scientific research much more broadly and variously than it has been sustained by the Federal Government of the United States. It has subsidized scientific research by independent grants from Parliament, by expanding the functions of governmental departments, by setting up new agencies under ministers without portfolios, and by other methods which appeared to be feasible as the occasions arose. Almost invariably the projects given governmental aid have been meritorious and the outcomes have been advantageous. The result has been that they have been continued without serious inquiries whether the same ends might not have been achieved more economically and better by other means. At least one thing is clear and that is that the amateur science of the days of Harvey and Newton and Cavendish and Faraday and Charles Darwin, in which men worked primarily to satisfy their curiosity about the world around them, is being succeeded by science sustained by governments largely for the purposes of national defense.

As illustrations of the changes that have come over the pursuit of science, the Royal Society of London had its origin in about 1645 from secret weekly meetings of "divers worthy persons, inquisitive into natural philosophy and other parts of human learning." The French *Academie des Sciences* had a similar origin a few years earlier in weekly meetings of savants to make experiments and discuss their discoveries. And in this country the founding of the American Philosophical Society by Benjamin Franklin followed a similar pattern.

Dr. Huxley commented on his attendance at the international meeting of the Russian Academy of Science which was held in Moscow last October. He found, as Americans did also, that the Russian academicians rank much higher among their people and have much more power and greater rewards than do corresponding British and American scientists. He was under the impression that the per capita expenditures of the Russian Government in direct support of science are several times greater than in England or the United States. Whether or not the comparison is substantially correct, the three great military powers, Britain, Russia, and the United States, are committing themselves to the support of science on a scale not heretofore approached.

One would like to believe that the recent interest in science being shown by the great powers is due primarily to a desire to reduce disease, remove hunger, and provide leisure for happier lives. But the complacency regarding science in the past and the feeling of urgency of the present preclude such a conclusion. The simple facts are that science now designs the weapons of war and that scientists are being compelled to become the gladiators of modern political arenas. It is not for such roles that Euclid and Aristotle and Galileo and Harvey and Pasteur and Röntgen and Einstein and a host of others learned the mysterious ways of the world about us and within us. They were proving that man is, or may be, higher than beasts. They were raising high hopes that a golden age of happiness and goodness was dawning. Then, with the suddenness of a summer storm, the nation which had been among the foremost leaders of science for many years twice within a generation plunged the world into wars of unparalleled ferocity and cruelty. Now all people tremble with fear that a more terrible disaster may overtake them and that they will be destroyed by the products of science. Scientists themselves have this fear, and even more acutely than those who do not know much about the terrible means of destruction they have devised.

The world is amazed at the tremendous efforts put forth by scientists in the development of the atomic bomb. They accomplished in four years more than had been accomplished in any other field of science in a generation by cooperative teamwork on a scale and by a variety of specialists not hitherto approached. For example, not much has appeared in the press about the work of medical men in connection with the development of the atomic bomb, but it was so comprehensive and successful that it should be kept before the public as an example of constructive work scientists can do. At the moment scientists are depressed by the possible misuses of their products. The remedy is to throw themselves with equal ardor into the supreme problem of making the high purposes of science as much a part of human lives as are its technological applications.—F.R.M.

The Association Building Fund

In October the Association announced its plan to obtain funds to provide itself a home. It was realized that the termination of the war and the numerous problems incident to changing from war to peace would be an adverse influence. Such was the case.

As of the first of January almost exactly 2150 contributions to the Association's building fund have been received and the total amount given was, in round numbers, $85,000, or an average of about $40 per contribution. If the remainder of the membership should contribute equally, the total would be sufficient. Evidently stronger efforts must be made, though a slow start in such projects has been the rule.

It should be stated that difficulties due to the termination of the war made it impossible to follow up the initial request for contributions. The return of husbands and prospective husbands took from the office of the Association almost the entire stenographic and clerical force. Several other losses of personnel added to the difficulties. There was one additional burden—a large number of new members—concerning which no complaint can be made.

As has been stated, the office work of the Association is carried on under almost intolerably difficult conditions. Part of the force is in the Smithsonian Institution building, occupying congested office space ranging from an almost inaccessible room on the second floor in one of the

towers to small rooms on the eighth and ninth floors of another tower.

If the membership of the Association were declining or if its role in advancing American science were completed or if it did not have the support of the most eminent of American scientists, there might be grounds for pessimism. But all its present difficulties are due to its rapid growth under wartime conditions and its future was never so promising as it is at present.

Election of Officers by Mail Ballot

On December 17, 1945, the fourth election of officers of the Association by mail ballot was completed, with Dr. James B. Conant, president of Harvard University, receiving a majority of all votes cast for president. The tellers who counted the ballots and presented a certificate report of election were Doctors Earl S. Johnston, Frank H. H. Roberts, and E. H. Walker.

The constitution of the Association provides that the officers shall be elected by the Council. Yet each year for a considerable number of years the entire membership has been invited to vote, a total of 8,106 votes having been cast in the recent election.

The Institute of Radio Engineers

Less than sixty years ago Heinrich Hertz, in his laboratory at Karlsruhe, demonstrated for the first time the generation and reception of electromagnetic waves. Alert to the significance of this phenomenon, Marconi, Poulsen, Alexanderson, Fessenden and other engineers at home and abroad developed long distances. With the advent of the vacuum tube in the early years of the first World War, wireless telegraphy gave way to wireless telephony and, later, to radio broadcasting. Radio in all its ramifications as known to us today stands as a superb tribute to the combined developmental genius of many thousands of engineers skilled in electricity, acoustics and electronics.

In May 1912, a small group of far-seeing engineers recognized in wireless of that day an infant industry which, through scientific research and engineering development, could be brought to magnificent fruition for the benefit of mankind. The growth and success of radio development was clearly seen to rest not alone upon international cooperation, but also upon collaboration in allied fields of science and engineering. Against this background Alfred N. Goldsmith, J. V. L. Hogan and R. H. Marriott founded, through the merger of two small professional societies, the Institute of Radio Engineers. Starting with fewer than fifty members in 1912, the Institute today embraces some 16,000 members from every corner of the globe.

The Institute of Radio Engineers is an incorporated, non-profit organization having as its object the advancement of the theory and practice of radio and electronics, including allied branches of engineering and all related arts and sciences. To this end, the Institute prepares technical papers, reports and general information of interest to radio engineers. It holds meetings and discussions in numerous localities throughout the United States and Canada. It maintains committees engaged in collating and standardizing the results of technical research and development. Typical among the fields covered in these activities are radio communication, sound broadcasting, television, marine and aerial guidance, tubes, radio-frequency, measurements, engineering education, electron optics, sound and picture electrical recording and reproduction, power and manufacturing applications of radio-and-electronic technique, industrial electronic control and processes, medical electrical research and applications.

Membership in the Institute is divided into several grades. With the exception of Fellow grade, one may apply for admission to any grade for which he is qualified. Fellow grade is awarded as an honor to those who have made outstanding contributions to the science or technology of radio and allied fields. Candidates for the offices of president and vice president must be Fellows of the Institute.

The grade of Senior Member is for the professional engineer of considerable achievement and is the highest grade for which application may be made. It requires active practice of the profession for at least six years and a minimum age of twenty-six, but executives, teachers, and others whose contributions are of equivalent standing may also qualify.

The grade of Member is for the professional engineer who does not meet the high requirements of the Senior Member grade, but he must be at least twenty-four years of age, have demonstrated competence, and have been in active practice of the profession, or been a teacher, for at least three years. Members have the same rights and privileges as Senior Members.

Those who are not qualified for Member grade may join as Associates. An interest in electrical communications and a good character are the only requirements. Associates receive the publications of the Institute, may attend meetings, but may not vote or serve as chairmen of standing committees. The Student grade permits a college student studying for an engineering degree, to obtain the PROCEEDINGS and attend meetings at the lowest possible cost.

Income of the Institute is derived primarily from membership dues and to a limited extent from non-member subscriptions to the publications. The dues for Fellows, Senior Members and Members are $10 per year. Associates pay $7 annually during their first five years in that grade and thereafter $10 per year. Dues for those in Student grade are $3 per year. An entrance fee of $3 is charged for all grades except that of student.

In the interest of promoting the arts and techniques incident to radio development, the Institute has established some 19 technical committees covering fields of current activity in radio engineering and composed of persons of demonstrated ability in their respective fields. Through the Institute, these committees publish brochures on standards. The object of these publications is to set forth, in collaboration with technical committees of other engineering societies, accepted definitions of terms and methods of measurements of physical quantities used in radio engineering practices.

To afford opportunity for personal contact and oral discussions, the Institute holds, at least once a year, a technical meeting for its entire membership. To facilitate interim meetings, Sections have been established throughout the United States, Canada and Argentina, functioning under the aegis of the Institute.

The management of the Institute of Radio Engineers resides in a Board of Directors, selected from the body

of Fellows and Senior Members, acting through an Executive Committee and the officers of the Institute. The president and vice president are elected anually from the body of Fellows of the Institute.

Perhaps the most important single activity of the Institute is the publication of the PROCEEDINGS of the I.R.E. which is issued monthly and has been published uninterruptedly since its establishment in 1913. The PROCEEDINGS is a technical journal devoted primarily to the theory, practice and application of electronics and electrical communication. In addition it carries editorials, discussions and general information of professional significance.

The Institute publishes periodically reports on *standards* prepared by its several technical committees. These include recommended terminology, definitions, graphical symbols and methods of testing, covering fields such as radio wave propagation, piezoelectric crystals, vacuum tubes, radio receivers and antennas. To lend coherence to this work in fields so diverse, the findings of the several technical committees are collated and given uniform representation in these pamphlets on *standards* by a special Committee on Standards.

The Institute annually bestows two awards in recognition of outstanding achievements in the theory, practice or application in the field of radio communication: The Institute Medal of Honor is awarded in recognition of distinguished service rendered through substantial and important advancement in the science and art of radio communication. The recipient of this Medal is named by the Board of Directors upon recommendation by the Awards Committee. The Morris Liebmann Memorial Prize carries a monetary award of varying amount, derived from the income of a $10,000 endowment fund. The fund was donated by "a friend and member of the Institute" to preserve the memory of Colonel Morris N. Liebmann, who gave his life in the cause of the United States in the first World War. This prize is given annually to a member of the Institute who, in the opinion of a special committee, shall have made an important contribution to the radio art.

The use of electronics was so widespread and important during the war that directors of the Institute were convinced that I.R.E. was destined to become one of the great engineering societies of the world. Pressed by the need for adequate headquarters space, a Building-Fund campaign was launched to raise a minimum of $500,000 for the purpose of providing the Institute with a permanent home, of expanding the facilities of the Institute and of creating a closer union between radio engineers and their industry.

The response was conclusive both in magnitude and in its mode of accomplishment. An impressive total which, at the date of this writing, stands at $622,000, has been contributed. The achievement made it clear that the industry is appreciative of its indebtedness to the engineers, and that the engineers fully recognize the opportunities of advancement which their industry presents to them. The fund is under the control of three administrators who have authorized withdrawals for the purchase, improvement and furnishing of a building at Fifth Avenue at 79th Street. The remainder of the fund will be left at interest to help defray the running expenses of the building or perhaps, ultimately, to permit joining with other engineering societies or scientific organizations in cooperative ownership of another property.—WILLIAM H. CREW, *Assistant Secretary*

Membership in the Association

Eligibility for Membership

Membership in the Association is open to all persons engaged in scientific work, whether in the fields of the natural or the social sciences; to all amateur scientists, whatever their special interests; and to all who desire to follow the advances of science and its effects upon civilization. Members having made substantial contributions to the advancement of science are eligible for election as fellows.

Dues and Publications

Membership dues are $5 per year, including subscriptions for the monthly A.A.A.S. BULLETIN and either the weekly journal *Science*, now in its 101st volume, or *The Scientific Monthly*, now in its 60th volume. *Science* is a journal for professional scientists; the *Monthly* is a nontechnical journal for the intelligent public. The Association also publishes technical symposia and nontechnical books on science that are available for members at prices substantially below those to the public.

Organization and Meetings

The Association was founded in 1848, with an initial membership of 461. Papers in its early programs were classified as either natural philosophy or natural history. Now its work is organized under 16 sections and 190 associated societies having a total membership of over 500,000. Its annual meetings are the greatest regular gatherings of scientists in the world.

Nominations and Applications for Membership

Members may submit nominations for membership at any time, and persons desiring to become members can obtain membership application forms from the Office of the Permanent Secretary, the Smithsonian Institution Building, Washington 25, D. C.

Changes of Address

New addresses for the Association's record and for mailing the journals *Science* and *The Scientific Monthly*, as well as the A.A.A.S. BULLETIN, should be in the Office of the Permanent Secretary, Washington 25, D. C., at least two weeks in advance of the date when the change is to become effective.

Officers of the Association

President, James B. Conant; *Permanent Secretary*, F. R. Moulton; *General Secretary*, Otis W. Caldwell; *Treasurer*, W. E. Wrather.

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